## Amendment to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

## **Listing of Claims:**

1. (currently amended) A compound of formula (1):

$$\begin{array}{cccc}
R^a & N(R)Ar \\
O & N & (1) \\
(A|k^1) L^1CV^1
\end{array}$$

wherein:

the dashed line joining A and C(Ra) is present and represents a bond and

A is a N=atom or is a  $-C(R^b)$ = group; or the dashed line is absent and  $\Lambda$  is a  $-N(R^b)$ , o  $-C(R^b)(R^a)$ -group;

 $R^a, R^b \text{-and } R^a \text{-are-each independently a hydrogen atom or an optionally substituted } C_{1.6}$  alkyl, CN, CO<sub>2</sub>H, CO<sub>3</sub>R<sup>4</sup>, CONH<sub>2</sub>, CONH<sub>2</sub> or CONR<sup>4</sup>R<sup>3</sup> group;

Ra is a hydrogen atom or a C<sub>1-4</sub>alkyl group;

R<sup>b</sup> is a hydrogen atom;

R+ and R2 are each, independently, an optionally substituted alykyl group;

R is a hydrogen atom or a straight or branched C<sub>1-6</sub> alkyl group;

X is an -O , -S -or substituted nitrogen atom or a -S(O) , -S(O2) or -NH-group;

X is an -S- atom:

Y is a nitrogen or substituted carbon atom or a CH-group;

Y is a -CH= or -C( $R^{10}$ )= group wherein  $R^{10}$  is -CN, -CONH<sub>2</sub>, -CONHet<sup>1</sup>, -CON( $R^{12}$ )Het, -CON( $R^{12}$ )Alk<sup>5</sup>Het or -CO<sub>2</sub>Alk<sup>6</sup>;

-NHet1 represents pyrrolidinyl, piperazinyl, morpholinyl or piperidinyl;

Het represents cyclopentyl, cyclohexyl, pyrrolidinyl, piperazinyl, morpholinyl or piperidinyl:

R<sup>12</sup> represents hydrogen or C<sub>1-6</sub>alkyl;

Alk5 is a straight or branched C1-6alkylene chain;

Alk<sup>6</sup> is a straight or branched C<sub>1-8</sub>alkyl group;

n is zero or the integer 1;

Alk+ is an optionally substituted aliphatic or heteroaliphatic chain;

Alk1 is -CH2- or -CH2CH2-;

L<sup>1</sup> is a covalent bond or a linker atom or group;

Cy<sup>t-</sup>is a hydrogen atom or an optionally substituted cycloaliphatic, polycycloaliphatic, heterocycloaliphatic, polyheterocycloaliphatic, aromatic or heteroaromatic group;

 $Cy^1$  is an optionally substituted  $C_{1.7}$ cycloalkyl, phenyl, thienyl, pyridyl or indolyl group, wherein the optional substituents on  $Cy^1$  are selected from halogen,  $C_{1.6}$ alkyl, halo $C_{1.6}$ alkyl,  $C_{1.6}$ alkoxy, halo $C_{1.6}$ alkoxy, cyano,  $-CO_2CH_3$ ,  $-CO_2C(CH_3)_3$ , nitro, amino,  $-NHCH_3$ ,  $-N(CH_3)_{2.4}$   $-C(O)CH_3$  and  $-NHCOCH_3$ ;

Ar is an optionally substituted aromatic or heteroaromatic group;

or a pharmaceutically acceptable salt, solvate, hydrate, or N-oxide thereof.

Ar is an optionally substituted phenyl, wherein the optional substituents on Ar are selected from halogen, C<sub>1-6</sub>alkyl, haloC<sub>1-6</sub>alkyl, C<sub>1-6</sub>alkoxy, haloC<sub>1-6</sub>alkoxy, cyano, -CO<sub>2</sub>CH<sub>3</sub>, -CO<sub>2</sub>C(C(H<sub>3</sub>)), nitro, amino, -NHCH<sub>3</sub>, -N(CH<sub>3</sub>)<sub>2</sub>, -C(O)CH<sub>3</sub> and -NHCOCH<sub>3</sub>;

or a pharmaceutically acceptable salt, solvate, hydrate or N-oxide thereof.

- 2. (Currently Amended) A-The compound according to Claim 1 wherein R is a hydrogen atom.
- 3. (Currently Amended) A-The compound according to Claim 1 wherein R<sup>a</sup> is a hydrogen atom.

- 4. (Cancelled)
- 5. (Cancelled)

- 6. (Cancelled)
- 7. (Cancelled)
- 8. (Cancelled)
- (currently amended) A-The compound according to Claim 1 wherein n is the integer 1 and Alk1 is an optionally substituted C<sub>1-c</sub>alkylene chain.
- 10. (Cancelled)
- 11. (Currently Amended) A The compound according to Claim 1 wherein n is zero.
- 12. (Cancelled)
- (Currently Amended) A The compound according to Claim 1 wherein Cy<sup>1</sup> is an optionally substituted C<sub>3.7</sub>cycloalkyl group, wherein the optional substituents on Cy<sup>1</sup> are selected from halogen, C<sub>1.6</sub>alkyl, haloC<sub>1.6</sub>alkyl, C<sub>1.6</sub>alkoxy, haloC<sub>1.6</sub>alkoxy, cyano, -CO<sub>2</sub>CH<sub>3.5</sub> -CO<sub>2</sub>C(CH<sub>3.5</sub>, nitro, amino, -NHCH<sub>3.5</sub>, -N(CH<sub>3.5</sub>, -C(O)CH<sub>3.5</sub>, and -NHCOCH<sub>3.5</sub>
- 14. (Currently Amended) A <u>The</u> compound according to Claim 13 wherein Cy<sup>1</sup> is a cyclopropyl group.
- 15. (Currently Amended) A <u>The</u> compound according to Claim 1 wherein Cy<sup>1</sup> is an optionally substituted phenyl group, <u>wherein the optional substituents on Cy<sup>1</sup> are selected from halogen</u>. C<sub>1-6</sub>alkyi, haloC<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, haloC<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, haloC<sub>1-6</sub>alkyi, C<sub>1-6</sub>alkyi, C<sub>1-6</sub>a
- (Currently Amended) A <u>The</u> compound according to Claim 15 wherein Cy<sup>1</sup> is a phenyl group.
- 17. (Cancelled)
- 18. (Cancelled)
- (Currently Amended) A The compound according to Claim 18 according to Claim 1 wherein Cy<sup>1</sup> is a thienyl, pyridyl or indolyl group.
- 20. (Cancelled)

(Currently Amended) A <u>The</u> compound according to Claim 1 wherein Y is a group—CH=or
-C(R<sup>10</sup>)=.

R<sup>10</sup>-is an atom or group R<sup>10a</sup>-or L<sup>6</sup>Alk<sup>5</sup>(R<sup>10a</sup>);

R<sup>10a</sup> is a halogen atom, or an amino (-NH<sub>2</sub>), substituted amino, nitro, eyano, hydroxyl

OH), substituted hydroxyl, formyl, earboxyl ( $-CO_2H$ ), esterified earboxyl, thiol (-SH); substituted thiol,  $-COR^{1+}$ ,  $-SO_2HH$ ,  $-SO_2HH$ ,  $-SO_2H^{1+}$ ,  $-SO_2NH_{2-}$ ,  $-SO_2NH_{2-$ 

-SO<sub>2</sub>NHet<sup>1</sup>, -CONHet<sup>1</sup>, -CSNHet<sup>1</sup>, -N(R<sup>12</sup>)SO<sub>2</sub>NHet<sup>1</sup>, -N(R<sup>12</sup>)CONHet<sup>1</sup>, -N(R<sup>12</sup>)CSNHet<sup>1</sup>, -SO<sub>2</sub>N(R<sup>12</sup>)Het, -Het, -CON(R<sup>12</sup>)Het, -CSN(R<sup>12</sup>)Het, -N(R<sup>12</sup>)CON(R<sup>12</sup>)Het, -N(R<sup>12</sup>)CSN(R<sup>12</sup>)Het, -N(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>)CSN(R<sup>12</sup>

R<sup>11</sup> is an L<sup>6</sup>Alk<sup>3</sup>(R<sup>10a</sup>), aryl or heteroaryl group;

Alk<sup>2</sup> is a straight or branched C<sub>1-3</sub>alkylene chain;

R<sup>12</sup> is a hydrogen atom or a straight or branched alkyl group;

-NHet\*-is an optionally substituted C<sub>2.7</sub>cyclicamino group optionally containing one or more O or S atoms or N(R<sup>+3</sup>), C(O) or C(S) groups;

-Het is an optionally substituted monocyclic C3-7carbocyclic group optionally containing one or more O−or−S−atoms or N(R<sup>12</sup>), −C(O), −S(O), or −S(O), −groups;

L<sup>6</sup> is a covalent bond or a linker atom or group;

Alk<sup>4</sup> is an optionally substituted straight or branched  $C_{1-6}$ alkylene,  $C_{2-6}$ alkenylene or  $C_{2-6}$ alkynylene chain, optionally interrupted by one, two or three O or S atoms or S(O)<sub>n</sub> or N(R<sup>13</sup>) groups;

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n is the integer 1 or 2; and

r is zero or the integer 1, 2, or 3.

22. (Cancelled)

- (Currently Amended) A <u>The</u> compound according to Claim <u>22.21</u>wherein R<sup>10</sup> is a <u>CN</u>, CONH<sub>2</sub>, <u>CONHR<sup>11</sup></u>, <u>CON(R<sup>11</sup>)<sub>2</sub></u>, <u>CONHet<sup>1</sup></u>, <u>CON(R<sup>12</sup>)Het</u>, <u>CON(R<sup>12</sup>)Alk<sup>5</sup>Het or esterified earboxyl group.</u>
- 24. (Cancelled)
- (Currently Amended) A <u>The</u> compound according to Claim <u>1</u> <u>24</u> wherein Ar is an optionally substituted phenyl group, wherein the optional substituents on Ar are selected from halogen, C<sub>1:3</sub>alkyl, C<sub>1:3</sub>alkoxy, and -CN.
- (Currently Amended) A <u>The</u> compound according to Claim 25 <u>wherein Ar is 3-methylphenyl</u> wherein Ar is a phenyl group or a phenyl group substituted by one, two or three atoms or groups R<sup>10a</sup> or <u>L6Alk5(R<sup>10a</sup>)</u>, where
- R<sup>40a</sup> is a halogen atom, or an amino ( NH<sub>2</sub>), substituted amino, nitro, eyano, hydroxyl ( OH), substituted hydroxyl, formyl, earboxyl ( CO<sub>2</sub>H), esterified earboxyl, thiol ( SH); substituted thiol, COR<sup>4+</sup>, CSR<sup>4+</sup>, SO<sub>2</sub>H, SOR<sup>4+</sup>, SO<sub>2</sub>R<sup>4+</sup>, SO<sub>2</sub>R<sup>4+</sup>, SO<sub>2</sub>NH<sub>2</sub>, SO<sub>2</sub>NHR<sup>4+</sup>, SO<sub>2</sub>NHR<sup>4+</sup>, SO<sub>2</sub>NH<sub>2</sub>, CSNH<sub>2</sub>, CSNH<sub>2</sub>, CONH<sub>2</sub>, CSNH<sub>2</sub>, N(R<sup>43</sup>)SO<sub>2</sub>NH<sub>2</sub>, N(R<sup>43</sup>)SO<sub>2</sub>NHR<sup>4+</sup>, N(R<sup>43</sup>)SO<sub>2</sub>NHR<sup>4+</sup>, N(R<sup>43</sup>)CSNH<sub>2</sub>, N(R<sup>43</sup>)Het, Het, CSN(R<sup>43</sup>)Het, N(R<sup>43</sup>)CSN(R<sup>43</sup>)Het, N(R<sup>43</sup>)CSN(R<sup>43</sup>)Het, N(R<sup>43</sup>)SO<sub>2</sub>NH<sub>2</sub>, N(R<sup>43</sup>)Het, N(R<sup>43</sup>)CSN(R<sup>43</sup>)Het, N(R<sup>43</sup>)CSN(R<sup>43</sup>)Let, N(R<sup></sup>

R<sup>++</sup>-is an -L<sup>6</sup>Alk<sup>3</sup>(R<sup>10a</sup>) - arvl or heteroarvl group:

Alk<sup>2</sup> is a straight or branched C<sub>1</sub> alkylene chain:

R<sup>12</sup> is a hydrogen atom or a straight or branched alkyl group;

-NHet<sup>†</sup> is an optionally substituted C<sub>3.7</sub>eyelicamino group optionally containing one or more
-O or S atoms or N(R12), C(O) or C(S) groups;

-Het is an optionally substituted monocyclic C<sub>2-7</sub>carbocyclic group optionally containing one or more O or S atoms or N(R<sup>13)</sup>, C(O), S(O) or S(O)<sub>2</sub> groups;

## L<sup>6</sup> is a covalent bond or a linker atom or group;

Alk $^{6}$  is an optionally substituted straight or branched  $C_{1-6}$ alkylene,  $C_{2-6}$ alkynylene chain, optionally interrupted by one, two or three O or S atoms or  $S(O)_{n}$  or  $N(R^{12})$  groups;

n is the integer 1 or 2; and

r is zero or the integer 1, 2, or 3.

- 27. (Currently Amended) A compound which is
- ethyl 3-(phenylamino)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate; ethyl 3-[(2-chlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(3-chlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- ethyl 3-[(4-chlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- ethyl 3-[methyl(phenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2-methoxyphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxylate;
- ethyl 6-oxo-7-phenyl-3-[(3-trifluoromethoxyphenyl)amino]-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(4-cyanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(3-cyanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2-cyanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(3-fluoro-4-methoxyphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-blnvridine-2-carboxylate:

ethyl 3-[(2,4-difluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;

ethyl 6-oxo-7-phenyl-3-[(3-tolyl)amino]-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate; ammonium 6-oxo-3-(phenylamino)-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;

3-(phenylamino)-7-phenylthieno[2,3-b]pyridin-6(7H)-one;

6-oxo-3-(phenylamino)-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

6-oxo-7-phenyl-3-phenylamino-6,7-dihydro-thieno[2,3-b]pyridine-2-carboxamide;

6-oxo-N-(2-piperidinoethyl)-3-(phenylamino)-7-phenyl-6,7-dihydrothieno[2,3-

b]pyridine-2-carboxamide;

6-oxo-3-(phenylamino)-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;

6-oxo-7-phenyl-3-phenylamino-6,7-dihydro-thieno[2,3-b]pyridine-2-carbonitrile;

3-(3-bromophenylamino)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:

 $3- (3-chlorophenylamino)- 6-oxo-7-phenyl- 6, 7-dihydrothieno \cite{2}, 3-b\cite{2} pyridine-2-carbonitrile;$ 

7-(2-chlorophenyl)-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;

 $\label{eq:condition} 7-(2-{\rm chlorophenyl})-3-[(4-{\rm fluoro-}3-{\rm methylphenyl}){\rm amino}]-6-{\rm oxo-}6,7-{\rm dihydrothieno}[2,3-b]{\rm pyridine-}2-{\rm carboxamide};$ 

3-anilino-7-(2-chlorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
3-anilino-7-(2-chlorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-/-(2-chlorophenyl)-6-oxo-6,/-dihydrothleno[2,3-b]pyridine-2-carboxamide

 $\label{eq:condition} 3-[(4-fluoro-3-methylphenyl)amino]-7-(4-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridino-2-carboxamide;$ 

7-(4-methylphenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:

7-(4-methylphenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

 $\label{prop:condition} 7-cyclopropyl-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile$ 

- 7-cyclopropyl-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothicno[2,3-b]pyridine-2-carboxamide;
- 7-cyclopropyl-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:
- 7-cyclopropyl-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(4-fluoro-3-methylphenyl)amino]-7-(2-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 3-[(2,4-difluorophenyl)amino]-7-(2-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 7-(2-methylphenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(4-fluoro-3-methylphenyl)amino]-7-(2-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 3-[(2,4-difluorophenyl)amino]-7-(2-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-anilino-7-(1H-indol-5-yl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
  3-anilino-7-(1H-indol-5-yl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
  ethyl 3-[(2-cyanophenyl)amino]-7-(1H-indol-5-yl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- $3\hbox{-}[(2\hbox{-}cyanophenyl)amino]\hbox{-}7\hbox{-}(1\hbox{H-}indol\hbox{-}5\hbox{-}yl)\hbox{-}6\hbox{-}oxo\hbox{-}6,7\hbox{-}dihydrothieno}[2,3\hbox{-}b]pyridine-2-carboxamide;$
- $ethyl\ 3-[(2-cyanophenyl)amino]-7-[1-(methylsulfonyl)-1H-indol-5-yl]-6-oxo-6, 7-dihydrothieno[2,3-b]pyridine-2-carboxylate;$
- ethyl 3-[(2-cyanophenyl)amino]-7-(1-methyl-1H-indol-5-yl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-anilino-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile; ethyl 3-anilino-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
  - 3-anilino-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

- 3-anilino-7-(cyclopropylmethyl)-N-methoxy-N-methyl-6-oxo-6,7-dihydrothicno[2,3-b]pyridine-2-carboxamide;
- ethyl 7-(cyclopropylmethyl)-3-[(2,4-difluorophenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- $\label{prop:lem:condition} 7-(cyclopropylmethyl)-3-[(2,4-difluorophenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-earboxamide;$
- 7-(cyclopropylmethyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 7-(cyclopropylmethyl)-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- $\label{eq:continuous} 3-[(3-chloro-4-fluorophenyl)amino]-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;$
- $\label{prop:linear} 7-(cyclopropylmethyl)-3-[(2,4-dimethylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;$
- $\label{prop:linear} \mbox{$7$-(cyclopropylmethyl)-3-[(3,4-dimethylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;}$
- 7-(cyclopropylmethyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 7-(cyclopropylmethyl)-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- $\label{prop:local_condition} 7-(cyclopropylmethyl)-3-[(3-chloro-4-fluorophenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;$
- $\label{prop:linear} 7-(cyclopropylmethyl)-3-[(2,4-dimethylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;$
- 7-(cyclopropylmethyl)-3-[(3,4-dimethylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-[(2-cyano-3-methylphenyl)amino]-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(2-cyano-3-methylphenyl)amino]-7-(cyclopropylmethyl)-6-oxo-6, 7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

- 3-anilino-7-(cyclopropylmethyl)-6-oxo-N-(2-piperidin-1-ylethyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-[(3-bromophenyl)amino]-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(3-bromophenyl)amino]-7-(cyclopropylmethyl)-6-oxo-6,7-dihydrothieno[2,3-blwyridine-2-carboxamide:
  - ethyl 3-anilino-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate; 3-anilino-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-[(2-cyanophenyl)amino]-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- $\label{eq:continuous} 3-[(2-cyanophenyl)amino]-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:$
- ethyl 3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-[(2,4-difluorophenyl)amino]-6-oxo-7-(3-thienyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 6-oxo-7-phenyl-3-(pyridin-3-ylamino)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2-chloropyridin-3-yl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- $3\hbox{-}[(6\hbox{-methylpyridin-2-yl})amino]\hbox{-}6\hbox{-}oxo\hbox{-}7\hbox{-}phenyl\hbox{-}6,7\hbox{-}dihydrothieno} [2,3\hbox{-}b]pyridine-2-carbonitrile:$
- 3-[(6-methylpyridin-2-yl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- $3\hbox{-}[(6\hbox{-}chloropyridin-2\hbox{-}yl)amino]-}6\hbox{-}oxo-7\hbox{-}phenyl-}6,7\hbox{-}dihydrothieno[2,3\hbox{-}b]pyridine-2-carbonitrile:}$
- 3-[(6-chloropyridin-2-yl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:

- ethyl 3-[(2-cyanophenyl)amino]-7-[4-(methylthio)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2-cyanophenyl)amino]-7-[4-(methylsulfinyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- 3-[(2-cyanophenyl)amino]-7-[4-(methylsulfinyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-blpyridine-2-carboxamide:
- $ethyl\ 3-anilino-7-[4-(methylthio)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;\\$
- $ethyl \ 3-anilino-7-[4-(methylsulfinyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;\\$
- $ethyl\ 3-[(3-methylphenyl)amino]-7-[4-(methylthio)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;$
- ethyl 3-[(3-methylphenyl)amino]-7-[4-(methylsulfonyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(3-methylphenyl)amino]-7-[4-(methylsulfonyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- ethyl 3-anilino-6-oxo-7-[4-(pyrrolidin-1-ylmethyl)phenyl]-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2,4-difluorophenyl)amino]-7-{4-[2-(2-methyl-1H-imidazol-1yl)ethoxy]phenyl}-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- $3-[(2,4-difluorophenyl)amino]-7-\{4-[2-(2-methyl-1H-imidazol-1-yl)ethoxy]phenyl\}-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;$
- $ethyl\ 3-[(2,4-difluorophenyl)amino]-6-oxo-7-(4-vinylphenyl)-6,7-dihydrothieno[2,3-b]\\pyridine-2-carboxylate;$
- ethyl 3-anilino-6-oxo-7-(4-vinylphenyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
  3-anilino-6-oxo-7-(4-vinylphenyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
  ethyl 3-anilino-7-[4-(1,2-dihydroxyethyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-anilino-7-[4-(1,2-dihydroxyethyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

- 3-[(2,4-difluorophenyl)amino]-7-(4-{[(2R)-2,3-dihydroxypropyl]oxy}phenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- ethyl 3-[(2,4-difluorophenyl)amino]-7-(2-nitrophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(2,4-difluorophenyl)amino]-7-(2-nitrophenyl)-6-oxo-6,7-dihydrothieno[2,3b]nyridine-2-carboxamide:
- ethyl 3-anilino-4-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-anilino-4-methyl-6-oxo-7-phenyl-6.7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- $\label{eq:condition} 3-[(2,4-\text{difluorophenyl})amino]-6-\text{oxo-7-phenyl-6,7-dihydrothieno}[2,3-b] pyridine-2-sulfonamide;$
- ethyl 3-anilino-7-[2-(2-methoxyethoxy)ethyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2,4-difluorophenyl)amino]-6-oxo-7-(tetrahydro-2H-pyran-2-ylmethyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
  - ethyl 3-anilino-7-benzyl-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
  - 3-anilino-7-benzyl-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
  - 3-anilino-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbohydrazide;
- ethyl 3-anilino-7-[4-(dimethylamino)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-anilino-7-[4-(dimethylamino)phenyl]-N-methoxy-N-methyl-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 3-anilino-7-[4-(dimethylamino)phenyl]-N-[3-(1H-imidazol-1-yl)propyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 3-anilino-7-[4-(dimethylamino)phenyl]-6-oxo-N-(2-piperidin-1-ylethyl)-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- $3-anilino-N, N-dimethyl-6-oxo-7-phenyl-6, 7-dihydrothieno \cite{2,3-b}\cite{$ 
  - 3-anilino-N.N-diethyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:

3-anilino-N-methoxy-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-[3-(4-methylpiperazin-1-yl)propyl]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pvridine-2-carboxamide:

3-anilino-N-[3-(1H-imidazol-1-yl)propyl]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-[2-(diethylamino)ethyl]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:

3-anilino-N-[2-(diethylamino)ethyl]-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-ethyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-(2-morpholin-4-ylethyl)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-[2-(dimethylamino)ethyl]-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-anilino-N-(3-morpholin-4-ylpropyl)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-[(2,4-difluorophenyl)amino]-N-methoxy-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

3-[(2,4-difluorophenyl)amino]-6-oxo-7-phenyl-*N*-(2-piperidin-1-ylethyl)-6,7-dihvdrothieno[2,3-*b*]pyridine-2-carboxamide;

3-anilino-N-(2-hydroxy-1,1-dimethylethyl)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

ethyl 3-[(3-chloro-2-cyanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;

ethyl 3-[(2-cyano-3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;

ethyl 3-[(2-cyano-5-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;

- ethyl 3-[(4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate:
- ethyl 3-[(3-chloro-4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-blpvridine-2-carboxylate:
- ethyl 3-[(2-cyanophenyl)amino]-7-(4-fluorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2-cyano-3-methylphenyl)amino]-7-(4-fluorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(4-fluoro-3-methylphenyl)amino]-7-(4-fluorophenyl)-6-oxo-6,7-
- dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(4-fluoro-3-methylphenyl)amino]-7-(4-chlorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(4-fluoro-3-methylphenyl)amino]-7-(3-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(3-methylphenyl)amino]-7-(3-methylphenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- 3-[(2,4-difluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 3-[(3-chloro-4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- $3\hbox{-}[(2\hbox{-methylphenyl}) a mino]\hbox{-}6\hbox{-}oxo\hbox{-}7\hbox{-phenyl-}6,7\hbox{-}dihydrothieno} \hbox{[}2,3\hbox{-}b] pyridine-2-carbonitrile:}$
- $\label{eq:carbonitrile} 3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;$
- 3-[(3,5-dichlor ophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothicno[(2,3-b)]pyridine-2-carbonitrile:

3-[(3-nitrophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;

- 6-oxo-7-phenyl-3-{[2-(trifluoromethoxy)phenyl]amino}-6,7-dihydrothieno[2,3blpvridine-2-carbonitrile:
- 3-[(2,6-dichlorophenyl)aminol-6-oxo-7-phenyl-6.7-dihydrothieno[2,3-b]pyridine-2carbonitrile:
- 3-{[2-(difluoromethoxy)phenyl]amino}-6-oxo-7-phenyl-6,7-dihydrothieno[2,3blpvridine-2-carbonitrile:
- 3-[(2,6-difluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carbonitrile:
- 3-[(4-fluoro-2-methylphenyl)aminol-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carbonitrile:
- 6-oxo-7-phenyl-3-({3-[(trifluoromethyl)thio]phenyl}amino)-6,7-dihydrothieno[2,3b]pyridine-2-carbonitrile;
- 3-[(3-bromo-4-methylphenyl)aminol-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-blpyridine-2-carbonitrile:
- 3-[(3-bromo-2-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 6-oxo-7-phenyl-3-{[3-(trifluoromethoxy)phenyl]amino}-6,7-dihydrothieno[2,3blpvridine-2-carbonitrile;
- 3-{[3-(methylthio)phenyllamino}-6-oxo-7-phenyl-6.7-dihydrothieno[2,3-b]pyridine-2carbonitrile;
- 3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carbonitrile:
- 3-[(3-ethylphenyl)aminol-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carbonitrile;
- 7-(4-fluorophenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:
- 3-[(2.4-difluorophenyl)amino]-7-(4-methoxyphenyl)-6-oxo-6.7-dihydrothieno[2.3blpvridine-2-carbonitrile:
- 3-[(2,4-difluorophenyl)aminol-7-(4-{[(2S)-2,3-dihydroxypropylloxy}phenyl)-6-oxo-6,7dihydrothieno[2,3-b]pyridine-2-carbonitrile;

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- 7-(4-acetylphenyl)-3-[(3-chlorophenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:
- 7-(2-chlorophenyl)-3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-blpvridine-2-carbonitrile:
- 7-(2-chlorophenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:
- 3-[(2-hydroxyphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile;
- 3-[(3-hydroxyphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carbonitrile:
- 7-(4-fluorophenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- $3\hbox{-}[(2,4\hbox{-}difluor ophenyl)amino]\hbox{-}6\hbox{-}oxo\hbox{-}7\hbox{-}phenyl\hbox{-}6,7\hbox{-}dihydrothieno}[2,3\hbox{-}b]pyridine-2-carboxamide:$
- $\label{lem:condition} 6-oxo-7-phenyl-3-\{[3-(trifluoromethyl)phenyl]amino\}-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;$
- 3-[(3,5-dichlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 3-[(3-bromophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- 6-oxo-7-phenyl-3-{[2-(trifluoromethoxy)phenyl]amino}-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- $3-\{[2-(difluoromethoxy)phenyl]amino\}-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;$
- 3-[(2,6-dichlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(3-bromo-4-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;

- 3-{[3-(methylthio)phenyl]amino}-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 6-oxo-7-phenyl-3-{[3-(trifluoromethoxy)phenyllamino}-6.7-dihydrothieno[2.3blpvridine-2-carboxamide:
- 3-[(4-fluoro-3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 6-oxo-7-phenyl-3-({3-[(trifluoromethyl)thio]phenyl}amino)-6,7-dihydrothieno[2,3blpvridine-2-carboxamide:
- 3-[(3-ethylphenyl)aminol-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 7-(2-chlorophenyl)-3-[(3-methylphenyl)amino]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(2-cyano-3-methylphenyl)aminol-7-(4-fluorophenyl)-6-oxo-6.7-dihydrothieno[2.3blpvridine-2-carboxamide:
- 3-[(4-fluoro-3-methylphenyl)amino]-7-(4-fluorophenyl)-6-oxo-6,7-dihydrothieno[2,3blpyridine-2-carboxamide;
- 3-[(2-cyanophenyl)amino]-7-(4-fluorophenyl)-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 3-[(2-hydroxyphenyl)aminol-6-oxo-7-phenyl-6.7-dihydrothieno[2.3-b]pyridine-2carboxamide;
- 3-[(3-hydroxyphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 3-[(2-cvanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 3-[(2-chlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 3-[(3-cyanophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide:
- 3-[(2-cvano-3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2carboxamide;

- 3-[(2-cyano-5-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(3-chloro-4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(4-fluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(3-chlorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide:
- 3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothicno[2,3-b]pyridine-2-carbothioamide:
- N,N-diethyl-3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboximidamide;
- 3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboximidamide:
- 3-[(2,4-difluorophenyl)amino]-N-(2-hydroxy-2-methylpropyl)-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
- methyl 2-({3-[(2,4-difluorophenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridin-2-yl}carbonyl)hydrazinecarboxylate;
  - 3-[(3-chlorophenyl)amino]-7-phenylthieno[2,3-b]pyridin-6(7H)-one;
- ethyl 3-anilino-7-[4-(1-hydroxy-1-methylethyl)phenyl]-6-oxo-6,7-dihydrothieno[2,3-b]pyridine-2-carboxylate;
- ethyl 3-[(2,4-difluorophenyl)amino]-7-{4-[(methylsulfonyl)amino]phenyl}-6-oxo-6,7-dihydrothienof2,3-blpyridine-2-carboxylate:
- 3-[(4-fluoro-3-methylphenyl)amino]-N-hydroxy-N-methyl-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
  - 2-acetyl-3-anilino-7-phenylthieno[2,3-b]pyridin-6(7H)-one;
- N,N-diethyl-3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboximidamide;
  - 3-anilino-6-oxo-7-pyridin-3-yl-6,7-dihydrothieno[2,3-*b*]pyridine-2-carbonitrile; 3-anilino-6-oxo-7-pyridin-3-yl-6,7-dihydrothieno[2,3-*b*]pyridine-2-carboxamide;

- 3-anilino-7-phenyl-2-(pyrrolidin-1-ylcarbonyl)thieno[2,3-b]pyridin-6(7H)-one;
- 3-anilino-7-phenyl-2-(piperidin-1-ylcarbonyl)thieno[2,3-b]pyridin-6(7H)-one;
- 3-anilino-2-[(4-ethylpiperazin-1-yl)carbonyl]-7-phenylthieno[2,3-b]pyridin-6(7H)-one;
- 3-anilino-7-[4-(dimethylamino)phenyl]-2-(pyrrolidin-1-ylcarbonyl)thieno[2,3-b]pyridin-6(7H)-one;
- 3-[(2,4-difluorophenyl)amino]-2-(morpholin-4-ylcarbonyl)-7-phenylthieno[2,3-b]pyridin-6(7H)-one;
- 3-{[6-oxo-7-phenyl-2-(pyrrolidin-1-ylcarbonyl)-6,7-dihydrothieno[2,3-b]pyridin-3-yl]amino}benzonitrile;
- 3-[(3-chlorophenyl)amino]-7-phenyl-2-(pyrrolidin-1-ylcarbonyl)thieno[2,3-b]pyridin-6(7H)-one;
- 3-[(2,4-difluorophenyl)amino]-7-phenyl-2-(pyrrolidin-1-ylcarbonyl)thieno[2,3-b]pyridin-6(7H)-one;
- $3\hbox{-}((4\hbox{-fluorophenyl})amino]\hbox{-}7\hbox{-}phenyl\hbox{-}2\hbox{-}(pyrrolidin-1\hbox{-}ylcarbonyl)thieno} [2,3\hbox{-}b]pyridin-6(7H)\hbox{-}one; or$
- 3-[(2,4-difluorophenyl)amino]-6-oxo-7-phenyl-N-pyrrolidin-3-yl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide;
  - or a pharmaceutically acceptable salt solvate, hydrate, or N-oxide thereof.
- (Previously Presented) A pharmaceutical composition comprising a compound of Claim 1 together with one or more pharmaceutically acceptable carriers, excipients or diluents.
- (Currently Amended) A <u>The</u> compound according to Claim 27 which is 3-[(3-methylphenyl)amino]-6-oxo-7-phenyl-6,7-dihydrothieno[2,3-b]pyridine-2-carboxamide.
- 30. (Previously Presented) A pharmaceutical composition comprising the compound according to Claim 29 together with one or more pharmaceutically acceptable carriers, excipients or diluents
- 31. (Previously Presented) A method for treating a mammal suffering from rheumatoid arthritis comprising administering to the mammal a therapeutically effective amount of a compound according to Claim 29.